

DOCKET NO. D-86-38 CP-2

DELAWARE RIVER BASIN COMMISSION

**Reading Regional Airport Authority
Waste Water Treatment Plant Replacement
Bern Township, Berks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) by Spotts, Stephens, and McCoy, Inc. on behalf of the Reading Regional Airport Authority on February 25, 2004 (Application) for review of waste water treatment plant (WWTP) replacement project. The project was approved by the Pennsylvania Department of Environmental Protection (PADEP) via Water Quality Management (WQM) Permit 0604401 and NPDES Permit No. PA 0028720 jointly on July 28, 2004, contingent upon approval by the DRBC.

The Application was reviewed for inclusion/continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Berks County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on September 27, 2006.

A. DESCRIPTION

1. **Purpose.** The purpose of this project is to replace the existing 0.175 mgd WWTP with an upgraded and expanded 0.42 mgd WWTP.
2. **Location.** The project is located off Leisch's Bridge Road between Reading Regional Airport and the Schuylkill River in Bern Township, Berks County, Pennsylvania. The plant outfall discharges to the Schuylkill River and is located at River Mile 92.47 - 80.3.

The project outfall is located in the Schuylkill River Watershed as found on the *Temple*, PA USGS Quad as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 22' 56"	75° 57' 10"

3. **Area Served.** The project will serve the Reading Regional Airport and associated development, the West Shore area, the Water District area and the Saint Joseph Medical Center area, all in Bern Township.

For the purpose of defining the Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISIONS section of this docket.

4. Physical features.

a. Design criteria. The original treatment plant was constructed in 1942 by the Army Corps of Engineers to process 0.175 mgd. In 1982, PADEP restricted flows to the WWTP to 0.12 mgd due to its poor performance. The plant was upgraded in 1986 and allowed to accept flows up to its original design capacity of 0.175 mgd, as described in DRBC Docket No. D-86-38 CP. As part of the proposed plant upgrade and expansion to 0.42 mgd, part of the existing conventional WWTP will be demolished after the proposed Sequencing Batch Reactor units (SBR) are completed. Several of the existing treatment facilities will be converted to ancillary treatment units in the proposed treatment scheme, as described below. The proposed WWTP is designed to treat an annual average flow of 0.42 mgd and a maximum monthly flow of 0.504 mgd from the Service Area through the year 2028.

b. Facilities. The existing plant consists of a flow meter, a comminutor, a bar screen, an aerated flow equalization tank, two Imhoff tanks which were converted to primary settling tanks, two trickling filters with plastic media, a pump station for recirculation, two final clarifiers, an effluent flow meter, a chlorine contact tank, and sludge drying beds. The sludge drying beds will be replaced by a mechanical sludge processing unit and two aerobic digesters, which will be converted from the existing two primary settling tanks. The existing equalization tank will serve as the new wet well. The two proposed SBR units will have settling and decanting chambers. SBR sludge will be metered and conveyed by gravity to the two aerobic digesters. Polymer addition will be used to enhance sludge processing. The existing chlorine contact tank disinfection system will be modified to include gas chlorination in two treatment tanks followed by dechlorination and discharge to the Schuylkill River. With the exception of the last 20 feet, the outfall headworks and the existing 12 inch diameter outfall line will be replaced with 350 feet of 20 inch diameter piping.

The WWTP has a generator available for emergency power supply that will provide primary power for treatment and chlorination.

The project facilities are above the 100-year flood elevation.

Waste sludge is hauled off-site by a licensed hauler for deposit at a State-approved facility.

c. Water withdrawals. The potable water supply in the project service area is provided by the Reading Area Water Authority, which is described in detail in Docket No. D-2000-59 CP, which was approved on September 28, 2000.

d. NPDES Permit / DRBC Docket. The NPDES Permit No. PA 0028720 approved by PADEP on July 28, 2004, includes final effluent limitations for the project discharge of 0.4 mgd to surface waters classified by the PADEP as a Warm Water Fishery, which is suitable for Water Supply, Recreation, and Fish Consumption. The following average monthly effluent limits are among those listed in the NPDES permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE: DRBC Parameters (*) Included in NPDES Permit for Outfall 001

OUTFALL 001 (Discharges to Schuylkill River)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	as required in the NPDES Permit
Total Suspended Solids	30 mg/l (85% minimum removal)*	as required in the NPDES Permit
Dissolved Oxygen	5.0 mg/l (minimum at all times)	as required in the NPDES Permit
CBOD (5-Day at 20° C)	25 mg/l *	as required in the NPDES Permit
Ammonia Nitrogen	20 mg/l	as required in the NPDES Permit
Fecal Coliform (5-1 to 9-30) (10-1 to 4-30)	200 colonies per 100 ml as a geo. avg. 10,000 colonies per 100 ml as a geo. avg.	as required in the NPDES Permit
Oil and Grease	15 mg/l	as required in the NPDES Permit
Total Residual Chlorine	1.0 mg/l	as required in the NPDES Permit
Total Dissolved Solids	Average monthly: 2,605 mg/l * Daily maximum: 5,210 mg/l * (per DRBC Determination of August 4, 2003)	as required in the NPDES Permit

e. Cost. The overall cost of this project is estimated to be \$3,938,000.

f. Relationship to the Comprehensive Plan. The project was included in the Comprehensive Plan by Docket No. D-86-38 CP on September 17, 1986. The project discharges to the Schuylkill River in an area conditioned as "Modified Recreational" within the Schuylkill River Scenic Designation, which was added to the Comprehensive Plan on October 26, 1988 by Docket No. D-78-50 CP (Revised).

B. FINDINGS

The limits in the NPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *Water Quality Regulations* of the DRBC, with the exception of TDS as referenced above.

PADEP approved the Act 537 Plan for the 0.42 mgd WWTP on March 12, 2003

Near the project site, the Schuylkill River has an estimated seven-day low flow with a recurrence interval of ten years of 104 mgd (161 cfs). The ratio of this low flow to the average design wastewater discharge from the 0.42 mgd plant is 248 to 1.

By letter dated August 4, 2003, the Executive Director issued a TDS determination approving an average monthly and daily maximum effluent limit of 2,605 mg/l and 5,210 mg/l (respectively). This determination is subject to review at the time of docket and NPDES renewal.

The nearest surface water intake of record for public water supply downstream of the project discharge is operated by the City of Pottstown over 23-river miles distant.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

I. Effective on the approval date for Docket No. D-86-38 CP-2 below:

a. The project described in Docket No. D-86-38 CP is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-86-38 CP-2; and

b. Docket No. D-86-38 CP is rescinded and replaced by Docket No. D-86-38 CP-2.

c. The project and the appurtenant facilities described in the Section A of this docket entitled, "Physical features" above shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section A of this docket entitled, "Physical features" above are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its NPDES Permit and Part II Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission's.

b. The facility and operational records shall be available at all times for inspection by the DRBC.

c. The facility shall be operated at all times to comply with the requirements of the *Water Quality Regulations* of the DRBC.

d. The docket holder shall maintain and make available to DRBC upon request, records identifying the sources, volumes and characteristics of all wastewaters and sludges treated at the WWTP, as well as the dates when off-site wastes were received and treated. Records are to be retained for 5 years.

e. The docket holder shall comply with the requirements contained in the Effluent Table in the Section A.4.d. of this docket.

f. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

g. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

h. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

i. Sound practices of excavation, backfill and reseeding shall be followed to minimize erosion and deposition of sediment in streams.

j. Within 10 days of the date that construction of the project has started, the docket holder shall notify the DRBC of the starting date and scheduled completion date.

k. Upon completion of construction of the approved project, the docket holder shall submit a statement to the DRBC, signed by the docket holder's engineer or other responsible agent, advising the Commission that the construction has been completed in compliance with the approved plans, giving the final construction cost of the approved project and the date the project is placed into operation.

l. This docket approval shall expire three years from date below unless prior thereto the docket holder has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

m. The docket holder is permitted to treat and discharge the categories of wastewaters defined in the "Area Served" section of this docket.

n. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

o. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

p. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

q. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

r. A complete application for the renewal of this docket, or a notice of intent to cease the operations (withdrawal, discharge, etc.) approved by this docket by the expiration date, must be submitted to the DRBC at least 12 months prior to the expiration date below (unless permission has been granted by the DRBC for submission at a later date), using the appropriate DRBC application form. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of this docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

s. The Executive Director may modify or suspend this approval, or require mitigating measures, pending additional review.

t. The docket holder and any other person aggrieved by a reviewable action or decision taken by the Executive Director or Commission pursuant to this docket may seek an administrative hearing pursuant to Articles 5 and 6 of the Commission's *Rules of Practice and Procedure*, and after exhausting all administrative remedies may seek judicial review pursuant to Article 6, section 2.6.10 of the *Rules of Practice and Procedure* and section 15.1(p) of the Commission's *Compact*.

BY THE COMMISSION

DATE APPROVED: September 27, 2006

EXPIRATION DATE: July 28, 2009